

Evaluating Hoarseness: Keeping Your Patient's Voice Healthy

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Hoarseness is the term often used by patients to describe changes in their voice quality. The causes of hoarseness are determined after obtaining a detailed medical history of the circumstances preceding the onset of hoarseness and performing a thorough physical examination. The latter may include visualization of the vocal cords, possibly using indirect laryngoscopy, flexible nasolaryngoscopy or stroboscopy. In the absence of an upper respiratory tract infection, any patient with hoarseness persisting for more than two weeks requires a complete evaluation. When the patient has a history of tobacco use, cancer of the head and neck must be considered and ruled out. Voice abuse is one of the most common causes of hoarseness and can lead to other vocal pathologies such as vocal nodules. Good vocal hygiene can prevent and treat some pathologies, and voice therapy is a cornerstone of management in some cases of hoarseness.

Hoarseness has many causes, ranging from a simple upper respiratory tract infection to a serious pathology such as head and neck cancer. This article discusses voice changes that may be described by patients as hoarseness and addresses the most important etiologies ([Table 1](#)). The physiology of voice production, diagnostic techniques for voice evaluation and recommendations for voice disorder prevention are outlined.

TABLE 1

Common Causes of Hoarseness

Functional dysphonia	Abnormal use of the vocal mechanism despite normal anatomy. This condition can be related to stress, psychologic disturbance or habituation of compensatory techniques developed during an upper respiratory infection.
Laryngeal papilloma	Growths on the larynx caused by human papilloma viral infection.
Muscle tension dysphonia	A voice disorder resulting from excessive or unequal tension while speaking. This condition results from improper speaking technique and is commonly associated with reflux laryngitis.
Reflux laryngitis	Inflammation of the larynx caused by gastric acid irritation.
Reinke's edema	An accumulation of fluid in the vocal cords. This condition is associated with smoking and voice abuse. It may also occur with reflux laryngitis.
Spasmodic dysphonia	A condition resulting in irregular voice breaks and interruptions of phonation. This is a focal dystonia of the laryngeal muscles.
Vocal cord paralysis	Weakness or immobility of the vocal cord(s).
Vocal nodules	Fibrotic formations on the vocal cords. Commonly referred to as "nodes."

Dysphonia is defined as an abnormal voice quality. The patient's complaint of hoarseness frequently represents something entirely different from the way the physician defines hoarseness, so it is important that the physician consider the different descriptions of voice quality when evaluating a patient's complaint. Voice quality may be described as breathy, strained, rough, tremorous or weak. On questioning, the physician may discover that what the patient terms hoarseness is actually increased vocal effort or vocal fatigue. Other aspects of dysphonia to inquire about, particularly in patients who are singers, are changes in pitch and abnormal pitch range. These specific disturbances often help the physician focus on possible diagnoses (Table 2).

TABLE 2

Differential Diagnosis of Hoarseness

Voice quality	Differential diagnosis
Breathy	Vocal cord paralysis, abductor spasmodic dysphonia, functional dysphonia
Hoarse	Vocal cord lesion, muscle tension dysphonia, reflux laryngitis
Low-pitched	Reinke's edema, vocal abuse, reflux laryngitis, vocal cord paralysis, muscle tension dysphonia
Strained	Adductor spasmodic dysphonia, muscle tension dysphonia, reflux Laryngitis
Tremor	Parkinson's disease, essential tremor of the head and neck, spasmodic dysphonia, muscle tension dysphonia
Vocal fatigue	Muscle tension dysphonia, vocal cord paralysis, reflux laryngitis, vocal abuse

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<http://www.aafp.org/afp/1998/0601/p2775.html>